

Environment

Environmental Performance Indicators

Environment	SINGTEL			OPTUS			SINGTEL GROUP		
	2020	2019	2018	2020	2019	2018	2020	2019	2018
Total energy use (GJ)	1,466,802	1,347,094	1,395,100	1,834,722	1,749,622	1,724,106	3,301,524	3,096,716	3,119,206
Energy intensity (GJ/\$million revenue)	180	161	169	219	194	191	200	178	181
Energy intensity (GJ/TB*)	0.30	0.35	0.43	0.49	0.59	0.71	0.38	0.46	0.55
(i) Electricity Use (GJ)	1,448,584	1,323,825	1,372,809	1,805,476	1,719,144	1,692,773	3,254,060	3,042,969	3,065,582
Electricity Use (MWh)	402,384	367,729	381,336	501,521	477,540	470,215	903,905	845,269	851,551
Electricity Intensity (GJ/\$million revenue)	177	158	167	216	191	187	197	175	178
Electricity Intensity (GJ/TB)	0.30	0.35	0.42	0.48	0.58	0.70	0.38	0.45	0.54
Electricity Intensity (kWh/TB)	83	97	118	133	160	195	105	125	151
(ii) Fuel use from non-renewable sources (GJ)	16,748	22,877	21,935	28,782	30,014	30,869	45,530	52,891	52,804
(iii) Fuel use from renewable sources (GJ)	1,470	392	356	464	464	464	1,934	856	820
Solar energy (MWh)	408	109	99	129	129	129	537	238	228
Total carbon emissions (tonnes CO ₂ equivalent) ¹	162,566	164,629	174,391	427,706	418,060	418,760	590,272	582,689	593,151
(i) Scope 1	3,741	4,085	3,367	2,140	2,567	2,725	5,881	6,652	6,092
Refrigerants	2,545	2,455	1,828	134 ²	470 ²	589 ²	2,679	2,925	2,417
Fuel combustion	484	733	587	304	291	329	788	1,024	916
Company fleet	712	897	952	1,702	1,806	1,807	2,414	2,703	2,759
(ii) Scope 2	153,650	154,152	164,470	412,932	402,290	399,257	566,582	556,442	563,727
(iii) Scope 3	5,175	6,392	6,554	12,634	13,203	16,778	17,809	19,595	23,332
Contractor fleet	254	411	687	1,138	1,264	1,168	1,392	1,675	1,855
Air travel	3,040	4,000	3,845	4,853	5,738	8,004	7,893	9,738	11,849
Employee commute	1,731 ³	1,821	1,821	6,643 ³	6,201	7,606	8,374	8,022	9,427
Retail franchisees	150	160	201	N.A.	N.A.	N.A.	150	160	201
Carbon Intensity (tCO ₂ e/\$ million revenue)	20	20	21	51	46	46	36	34	34
Carbon Intensity (tCO ₂ e/TB) ⁴	0.03	0.04	0.05	0.11	0.14	0.17	0.07	0.08	0.10
Total Water Use (m ³)	864,646 ⁵	753,238	752,207	68,737 ⁶	78,774	74,235	933,383	832,012	826,442
Water Intensity (m ³ /\$million revenue)	106	91	90	N.A.	N.A.	N.A.	56	48	47
Total Waste: hazardous and non-hazardous (tonnes)	7,658	7,538	6,289	883 ⁷	2,294 ⁷	2,197 ⁷	8,541	9,832	8,486
Total Non-Hazardous Waste by disposal method (tonnes)	1,567	2,130	2,227	690 ⁷	1,683 ⁷	1,972 ⁷	2,257	3,813	4,199
Incineration with energy recovered	1,376	1,972	1,968	N.A.	N.A.	N.A.	1,376	1,972	1,968
Landfill	0	0	0	568	1,476	1,720	568	1,476	1,720
Recycle / Reuse	191	158	259	122	207	252	313	365	511
Total Hazardous Waste by disposal method (tonnes)	6,091	5,408	4,062	193 ⁷	611 ⁷	225 ⁷	6,284	6,019	4,287
Incineration with energy recovered	324	282	388	N.A.	N.A.	N.A.	324	282	388
Landfill	777	776	593	6	8	3	783	784	596
Recycle / Reuse	4,990	4,350	3,081	187	603	222	5,177	4,953	3,303
Customer E-waste Recycling (tonnes)	66	63	36	4	4	4	70	67	40

Footnotes:

* TB refers to terabyte of data transported across our network.

- The carbon emissions reported in the table are based on the reporting requirements of the WRI and WBCSD 'GHG Protocol Corporate Accounting and Reporting Standard'. The equivalent CO₂ emissions for electricity use are calculated based on the updated simple operating margin grid emission factors from the National Environment Agency and electricity supplier emission factor in Singapore for the relevant time period and from corresponding states in Australia. Scope 1 direct emissions and Scope 3 indirect emissions are calculated using BEIS (Department for Business, Energy & Industrial Strategy) Greenhouse gas reporting: conversion factors 2019, NGERs and WRI.
- Optus uses a combination of air, water and refrigerant cooling systems. Refrigerants tracked from FY2018.
- Employee commute carbon emissions data updated with FY2020 employees numbers. Optus data updated with new survey conducted in 2019 and applies to Optus Sydney campus.
- Covers Scope 1 and 2 only.
- Total volume withdrawn from municipal water supplies and includes use of 180,799 m³ NEWater instead of potable water. Water stress areas are not applicable.
- Total volume withdrawn from municipal water supplies and includes rainwater harvesting of 10,876 m³ instead of potable water. Water use covers Optus Sydney campus and Optus Melbourne office only.
- Data covers waste directly managed by Optus' contracted waste vendor.